

## **REMARKS**

### **I. Introduction**

Claims 7 to 13, 15 to 17, and 19 to 22 are currently pending in the present application. In view of the foregoing amendments and following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants thank the Examiner for considering the Information Disclosure Statement of July 20, 2009, PTO-1449 paper, and cited references.

### **II. Objection to Claim 10**

Claim 10 has been amended herein without prejudice to obviate the objection. Withdrawal of the objection to claim 10 is therefore respectfully requested.

### **III. Rejection of Claim 10 Under 35 U.S.C. § 112, ¶ 2**

Claim 10 was rejected under 35 U.S.C. § 112, ¶ 2 as assertedly indefinite because "it is indefinite as to how a register can be a RAM." Claim 10 has been amended to clarify that the register is a RAM element. Thus, the register is a memory element provided for random access thereto. Accordingly, the claim is clear, gives rise to no ambiguity, and is therefore definite. Withdrawal of this indefiniteness rejection is therefore respectfully requested.

### **IV. Rejection of Claims 7, 10, 11, 15 to 17, and 19 to 22 Under 35 U.S.C. § 103(a)**

Claims 7, 10, 11, 15 to 17, and 19 to 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,658,564 ("the Smith reference"), U.S. Patent No. 5,860,119 ("the Dockser reference"), and U.S. Patent No. 6,076,157 ("the Borkenhagen reference"). It is respectfully submitted that the combination of the Smith, Dockser, and Borkenhagen references does not render unpatentable any of claims 7, 10, 11, 15 to 17, and 19 to 22, and the rejection should be withdrawn, for at least the following reasons.

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied.

First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaech*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). As clearly indicated by the Supreme Court, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1741.

Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986).

Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As explained herein, the Office Action does satisfy these requirements of either of §§ 102 and 103 as to all of the features of the claims.

Claim 7 relates to a method of data processing using a processor including a reconfigurable field of data processing cells and a register, and, as herein amended without prejudice, recites “determining, for the reconfigurable field of data processing cells, a set of configurations of the reconfigurable field of data processing cells, with respect to at least one of a function and an interconnection of the reconfigurable field of data processing cells, with execution of which configurations the program is run; determining, for each of the configurations, a respective maximum allowed execution runtime prior to lapse of which the respective configuration is uninterruptible.” Support for the amendments to the claims may be found in the Substitute Specification, e.g., at page 1, lines 6 to 11; page 2, lines 21 to 23; page 3, lines 25 to 26; and page 8, lines 3 to 7.

With respect to the maximum allowed execution runtime, the Office Action refers to the Borkenhagen reference as assertedly disclosing this feature. However, the Borkenhagen reference has nothing to do with configurations, and instead refers to a forced thread switch for a thread after some time. Thus, at most, the Borkenhagen reference refers to a maximum runtime for a thread; not for a configuration. Indeed, the Office Action refers to the Smith reference as assertedly disclosing a configuration, besides for threads. However, the mere mentioning in the Smith reference of a configuration and of a thread in no way

suggests applying a maximum runtime to a configuration as with a thread in the Borkenhagen reference. Indeed, threads are parts of a program that can be executed independently of each other, for example, in parallel,<sup>1</sup> whereas configurations are of the function and/or interconnection of reconfigurable processing cells, which can then be used in their configurations for executing one or more parts of a program. Thus, there is no one-to-one correspondence of a thread to a configuration,<sup>2</sup> and the reference to a forced thread switch after some time in the Borkenhagen reference in no way suggests a forced configuration switch after some time.

Moreover, the present application provides for applying a maximum runtime to a configuration, without qualification, and claim 7 has thus been amended herein without prejudice to recite "monitoring the respective maximum allowed execution runtime in order to interrupt processing with the configuration if the respective maximum allowed execution runtime is exceeded." With respect to a thread, the Borkenhagen reference does not disclose or suggest any such maximum runtime, but instead provides for a thread switch only if an active thread does not perform any processing for some time. Therefore, the Borkenhagen reference does not disclose interrupting processing of the thread if a maximum allowed time for the thread is exceeded. Accordingly, even if the cited references had suggested applying the thread switching method of the Borkenhagen reference to configurations (which they do not), the method would still not disclose or suggest this feature of claim 7.

The Dockser reference does not correct the above-mentioned critical deficiencies of the Smith and Borkenhagen references.

For all of the foregoing reasons, the combination of the Smith, Dockser, and Borkenhagen references does not disclose or suggest all of the features of claim 7, and therefore does not render unpatentable claim 7 or any of its dependent claims, e.g., claims 10, 11, 15 to 17, and 19 to 22.

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<sup>1</sup> This is the generally accepted definition of a thread and is clearly what is intended by the Borkenhagen reference, which refers to multithreading and thread switches. However, it appears that the Smith reference's use of the term thread is not according to the generally accepted definition. In this regard, the term thread in the Smith reference appears to be out of place, since the Smith reference refers to compiling software functions into threads. See, column 2, lines 26 to 27. However, software functions are compiled into object code; not threads. Threads, according to the generally accepted definition, are groups of such compiled object code which can be independently executed, for example, in parallel. Further, nothing in the Smith reference explains why threads are pertinent to its subject matter, if the term is intended by the Smith reference according to the generally accepted definition.

<sup>2</sup> It is further noted that the Smith reference does not disclose or suggest any one-to-one correspondence between its mentioned threads and configurations, and, even if it had done so, as noted above, the Smith reference apparently does not refer to threads in its usual sense as does the Borkenhagen reference and therefore has no bearing on the teachings of the Borkenhagen reference with respect to its threads.

Withdrawal of this obviousness rejection of claims 7, 10, 11, 15 to 17, and 19 to 22 is therefore respectfully requested.

**V. Rejection of Claims 8 and 9 Under 35 U.S.C. § 103(a)**

Claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the Smith, Dockser, and Borkenhagen references in further view of U.S. Patent No. 5,941,977 ("the Panwar reference"). It is respectfully submitted that the combination of Smith, Dockser, Borkenhagen, and Panwar references does not render unpatentable either of claims 8 and 9, and the rejection should be withdrawn, for at least the following reasons.

Claims 8 and 9 ultimately depend from claim 7 and are therefore allowable for at least the same reasons set forth above in support of the patentability of claim 7 since the Panwar reference does not cure the critical deficiencies noted above with respect to the combination of the Smith, Dockser, and Borkenhagen references.

Withdrawal of this obviousness rejection of claims 8 and 9 is therefore respectfully requested.

**VI. Rejection of Claims 12 and 13 Under 35 U.S.C. § 103(a)**

Claims 12 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the Smith, Dockser, and Borkenhagen references, in further view of U.S. Patent No. 4,041,462 ("the Davis reference"). It is respectfully submitted that the combination of the Smith, Dockser, Borkenhagen, and Davis references does not render unpatentable either of claims 12 and 13, and the present rejection should be withdrawn, for at least the following reasons.

Claims 12 and 13 ultimately depend from claim 7 and are therefore allowable for at least the same reasons set forth above in support of the patentability of claim 7 since the Davis reference does not cure the critical deficiencies noted above with respect to the combination of the Smith, Dockser, and Borkenhagen references.

Withdrawal of this obviousness rejection of claims 12 and 13 is therefore respectfully requested.

**VII. Conclusion**

In light of the foregoing, it is respectfully submitted that all of the presently pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

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